RESPONSE

Drawings

1. **The drawings received on 05/19/04 are not acceptable because the drawings do not comply with 37 CFR 1.121. In particular, the changes to the drawings shall be explained, in detail, in either the drawing amendment or remarks section of the amendment paper.** The applicant has sent amended replacement drawings in this response, and response to the examiner's objections that comply with the CFR rules.

2. **The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "39" and "40" in Figure 5 have been used to designate the same plate.** The roof plate **39** shown on Fig. 5 should be a separate figure. The applicant has designated the roof plate **39**, as Fig. 5A. The applicant wanted the reference character "39" to refer to the whole roof plate, hence the arrow on the lead line. The applicant intended the reference character "40" to refer to the top surface of the roof plate.

3. **The drawings are objected to as failing to comply with 37 CFR 1.84(p)94) because reference characters "44" and "45" in Figure 6 have both been used to designate the interface of the sheathing tab 30 and the strengthening tab 32. The drawings are objected to because reference character 44 does not depict a grommet. Further, reference character 45 does not depict a hollow rivet.** The lead line for the grommet **44** points in-between the sheathing tab **30** and the strengthening tab **32**. The grommet **44** was meant to be a crush-able washer that would be in-between and could tie together a sheathing tab **30** and a strengthening tab **32**. A hollow rivet **45** could also be inserted in the bolt holes **36** for added strength.

The following is from the specification on the bottom of page 25. "When the cyclone clip **16** is produced at the tool and die shop, a grommet **44** can be inserted between the sheathing tab **30** and **31**, and the strengthening tab **32** and **33**. The grommet **44** would tie both flat metal pieces solidly together. A hollow rivet **45** in the center would still allow the threaded shaft of the carriage bolt to enter." This is probably best said than shown. The applicant will remove reference numbers "44" and "45", and their lead lines from Fig. 6 to make the figure less confusing.

4. **The bracket shown adjacent to reference character "T" in Figures 2 and 6 is misleading. Is "T" depicting top plates or a top plate? Applicant should consider using lead lines as brackets are only used to show the components that belong to an exploded figure.** Standard practice for exterior wall framing is to use a double top plate. The applicant patterned the invention for his post-and-beam home, which uses a singular thick beam for the top plate. The invention can be used on a single beam, or a double top plate. The important function is that the retrofit invention can attach to the underlying structural top plate, from the outside of the house, by nails going through the outside sheathing. With the brackets on the drawings, the applicant intended the double members to be considered the "top plate". The applicant will delete the top plate brackets and add lead lines on Figs. 2, 3, and 6, and delete cut line brackets on Figs. 3, 4, and 5..

Specification

5. **The disclosure is objected to because of the following informalities. The description of reference character W is not consistent. In several instances, "W" is an outside wall sheathing (see page 15 2nd paragraph, line 3) and an outside wall (see page 16, 3rd paragraph, line 40 Therefore, the description is not consistent.** An outside wall is normally constructed of studs with a double top plate. Wall sheathing is a tight outside covering that is nailed directly to this framework. The most common are plywood, boards, and special insulating boards. The sheathing can be covered with wood, vinyl, or aluminum cladding. The cladding may be stapled, or nailed to the sheathing, but except for wood boards, the cladding provides little or no structural support to the wall.

Sheathing is not included in all house constructions as some codes do not make it mandatory. The applicant's home in Hawaii uses lumber siding on the exterior as sheathing. This is common in warm climates. Since many products can be applied to the exterior wall of a completed house, the applicant used "outside wall" and "outside wall sheathing" interchangeably to mean the exterior surface of the outside wall where the roof rests upon.

6. **Further, the disclosure fails to provide a "Brief Summary of the Invention".** The applicant has included a Brief Summary of the Invention on a separate sheet in this response.

7. **The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Correction of the following is required: "attaching means to the outside wall and underlying top plate" recited in claim 10, lines 3-4 lack proper antecedent basis.** On page 16 of the specification, lines 5-6 state "During a hurricane, it prevents the roof rafter **R** from disconnecting from the outside wall sheathing **W**, and underlying top plate **T** by uplifting forces." On page 17, lines 7-8 from the bottom of the page state "The nail holes **14A** on the top part of the base web **14** provide nailing through the outside wall sheathing **W** and into the top plate of the top plate **T**."

On page 16, the applicant says the top plate underlies the outside wall sheathing, and on page17 says the nail holes provide nailing or attaching means. The applicant states "outside wall sheathing", not "outside wall". The applicant respectfully requests that the examiner change claim 10, lines 3-4 to the following:
"attaching means to the outside wall surface and underlying top plate, the roof rafter, and the frieze boards or"
This should indicate that the invention attaches to the outside of the outside wall.

Claim Objections

8. **Claims 1, 3, 4, 6, 9, 10, and 17 are objected to because of the following informalities: regarding claim 1 "web" in line 13 should be –webs–.** The applicant agrees and has changed claim 1 in the amended claims.

9. **Regarding claims 3 and 4, these claims do not further limit the connector as these limitations are inherent features of the first acute angled bend in claim 1,line 9-10 and the unequal acute angled bend in claim 1, line 10-11.** The applicant agrees that claim 3 adds no limitations and respectfully requests that the examiner cancel claim 3. Claim 4 adds the limitation of the "unequal acute angle (bend)". The applicant has deleted "unequal" from claim 1 and added other limitations that read over the cited reference. With the amended claim 1, claim 4 adds the "unequal" limitation, and should remain.

10. **Regarding claim 6, "said roof" should be –a roof– as a roof has not been previously recited.** The applicant agrees and has changed claim 6 in the amended claims.

11. **Regarding claim 9, –a– needs to be inserted after "or" in line 3, and "said" in line 4 needs to be –a– as "said house" lacks proper antecedent.** A frieze board, blocking, and house have been previously stated in amended claim 5 which should now be allowable.

12. **Regarding claim 10, –the–in line 3 should be –an–, –an– needs to be inserted before "underlying top plate" in line 3, the first occurrence of " the" in line 4 should be –a– as a roof rafter has not been previously recited.** Amended claims 6 and 8 now recite the roof rafter and underlying top plate.

13. **Regarding claim 10, the second occurrence of "the" in line 4 should be deleted as frieze boards have not been previously recited, –a– needs to be inserted before "blocking" in line 4, and –the– needs to be inserted before "roof" in line 6 as this is the same roof recited in claim 1, line 3.** Amended claims 5 and 9 now recite the frieze boards and blocking, and "the roof' has been fixed in claim 10.

14. **Regarding claim 17,–the– needs to be inserted before "wall" in line 4 as this is the same wall recited in claim 15, line 4, and "the roof" in lines 5-6 should be –a roof– as a roof has not been previously recited.** The applicant agrees and has amended claim 17.

Claim Rejections 35 USC § 112

15. **Claims 6-10 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 6, how does the limitation "providing a buttress between said roof rafter and said wall" in lines 4-5 limit the connector when the wall is not part of the invention?** A buttress opposes outward thrusts. Refer now to the applicant's Fig. 2. The offset web **13**, and acute angles **9** and **12**, form a buttress shape between the base web **14** and blocking webs **3** and **4**, and the right-angled rafter tabs **7** and **8**. When the base web **14** is attached to the sheathing and underlying top plate, and the rafter tab(s) **7** are attached to the rafter, the invention prevents the rafter from thrusting outwards past the wall. The applicant has amended claim 6 to claim this distinction.

16. **Regarding claim 7, how does the blocking webs, as previously indicated as having right angled bends, divide the blocking webs into equal left and right blocking webs?**

The applicant was looking at the flat pattern layout and how the vertical cut 6 divided the blocking webs. But the applicant realizes that the completed invention must be described in the claims. Besides the vertical cut, the right angle bends form an open space that also divides the blocking webs. The applicant has amended claim 7 to claim this "open space" distinction.

17. **Regarding claim 8, it is unclear from what features are the rafter tabs vertical and parallel from.** Vertical is not very descriptive, so the applicant respectfully requests that the examiner delete it. The rafter tabs are parallel to each other, and the applicant will amend the claim to state this distinction.

18. **Regarding claim 9, it is unclear whether the frieze boards and the blocking on a house are being claimed in combination with the connector. Since the blocking webs are being further defined as being parallel to the frieze boards or the blocking on the house, it appears that the frieze boards, the house, and the blocking on the house are being claimed.** Referring to the applicant's Fig. 2, the left blocking web 3 is "adjacent to" the frieze board F, which is a better descriptor than "parallel". The blocking webs are adjacent to the blocking or frieze boards when the invention is installed on a house. The applicant will state this distinction in the amended claim, but not claim the frieze boards or blocking..

19. **Regarding claim 10, the limitation "attaching means to the outside wall and –an– underlying top plate, etc." in lines 3-4 is unclear as something is missing in the claim. Further, it is unclear what structure corresponds to the attaching means. The disclosure fails to indicate what is the attaching means.** On the bottom of page 15 of the specification, the applicant states that nails or screws can be used to fasten the invention to a house. In claim 8 and 9, the applicant states that the invention has nail holes. In claim 10, the applicant was writing a narrower claim by stating all the structural members of a house that could be tied together with the invention. The applicant thought that "attaching means" indicated nails, screws, staples, liquid nails, etc. The applicant has added "nails or screws" to the amended claim.

20. **Regarding claim 17, how does the limitation "forming a buttress between a roof rafter and –the– wall in lines 4-5 further limit the connector when the wall is not part**

of the invention? As stated for claim 6, the buttress shape is formed in profile as shown on the applicant's Fig. 2. Claim 17 has been amended similar to claim 6.

Claim Rejections 35 USC § 102

21. **Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Way, Sr., 5,813,173 (see marked up attachments provided in the last Office Action. Regarding claim 1, Way, Sr. discloses in Figures 3, 4, and 6 a unitary connector comprising a base web 18 (the right one in Fig. 4), offset, angled, blocking webs A2 (Fig. 3), and an offset web 16. The blocking webs A2 each have a generally right angled bend A3 forming a rafter tab A4 (Fig. 6). The base web 18 and each of the blocking webs A2 are connected by the offset web 16. The offset web 16 has a first acute angled bend A6 attached to the base web 18 and a second, unequal, acute angled bend A7 attached to the blocking webs A2. The rafter tabs A4 (Fig. 6) are generally perpendicular to the blocking webs A2.** Way's Fig. 4 shows that the axis of every bend is parallel (toward the viewer). Refer now to the applicant's Fig. 1 which shows that the axis of the acute angle bends **9** and **12** are parallel. But the axis of the right angle bends **4** and **5** are perpendicular to the acute angle bends. This distinction will be stated in amended claim 1.

22. **The (Way's) connector is able to retrofit onto existing buildings and help prevent hurricane and earthquake damage by positively connecting a roof to a wall.** Way's invention can be retrofit on to a building. Way's Fig. 1 shows the outer edge of his invention "with the engagement of the lip **34** with the edge of the gutter **24**" (column 5, lines 21-22). The inner part of Way's gutter protector "is flexed slightly to enable the inner edge portion **12** to slide under the shingles **28**" (column 5, lines 17-18. The gutter is connected to the wall, and the shingles are connected to the roof, but Way's gutter protector provides no direct, positive connection between the roof and wall, and cannot prevent hurricane or earthquake damage to a building. The applicant's amended claim 1 reads over Way.

23. **Regarding claim 3, the offset web 16 is connected to the base web 18 by the first acute angled bend A6 at an acute angle.** The applicant has canceled claim 3.

24. **Regarding claim 4, the offset web 16 is connected to the blocking webs A2 by the second, unequal, acute angled bend A7 at an unequal acute angle.** On Way's Fig. 4, each of his angled bends only connects two sections together. Referring to the applicant's Fig. 1, the second acute angle bend **9** connects the offset web **13** to two blocking webs **2** and **3**. Claim 4 states "blocking webs" which reads over Way.

25. **Regarding claim 5, the first acute angled bend A6 and the second, unequal acute angled bend A7 are attached to opposite ends of the offset web 16, and have generally unequal acute bends in opposite directions.** On Way's gutter protector, the angles at his junctions are chosen to wash leaves and other debris from the surface, and so that the perforations are not visible (column 5, lines 52-61). Way's flexible (column 5, line 17) angles can then be bent at any angle including obtuse angles (Fig. 4, 34) in order to fit different gutters and under the shingles. Since Way's angles can be changeable, the applicant's amended claim 5 reads over Way.

26. **Regarding claim 6, as best understood, the first acute angled bend A6, the second, unequal, acute angled bend A7, and the offset web 16 form the base web 18 and the blocking webs A2 are unparallel to each other.** Amended claim 6 now states the "buttress profile that helps oppose outward thrusts". Since Way's gutter protector has a flexible, undulating profile, it does not form a strong buttress profile, nor can it oppose outward thrusts.

27. **Regarding claim 7, the blocking webs A2 divide the blocking webs A2 into generally equal left and right blocking webs A2.** Amended claim 7 now states that the "right angle bends form an open space between them, dividing said blocking webs...". The "open space" in amended claim 7 reads over Way.

Allowable Subject Matter

28. **Claims 15-16 and 18-23 are allowed.** The applicant again respectfully thanks the examiner.

29. **Claim 2 is objected to as being dependent upon a rejected base claim, but would be**

allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claim 2, the prior art of record does not disclose or suggest an apparatus comprising a base web with nail holes (line 3). The applicant respectfully requests that the examiner move the bulk of claim 2 into claim 1a, and cancel claim 2, as shown on the amended claims. With this change, and the before mentioned changes, independent claim 1 should now be allowable.

30. **Claims 8-10 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims. Regarding claim 8, as best understood, the prior art of record does not disclose or suggest an apparatus comprising rafter tabs being parallel to each other (line 2) and having nail holes (line 3).** The applicant is enclosing a copy of the applicant's US Patent No. 6,662,517 front page which shows an apparatus comprising rafter tabs being parallel to each other and having nail holes. Claims 8-10 have been rewritten to overcome the stated rejections.

31. **Claim 17 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office Action.** The applicant has rewritten claim 17 to over the rejections.

32. Accordingly, since the applicant perceives that the amended claims read over the cited reference, the applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits. If the examiner agrees but does not feel that the present claims are technically adequate, applicant respectfully requests that the examiner write acceptable claims pursuant to MPEP 707.07(j).

Very Respectfully,

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Makakilo, HI 96707
808 672-3107

Brief Summary of the Invention

A retrofit hurricane tie that connects the roof to the exterior walls on an existing building. Parallel webs allow attachment to opposite sides of a roof rafter, and a perpendicular base member allow attachment to the outside wall. An offset web, and unique bends between the rafter webs and base member allow the connector to clear blocking and frieze boards beneath the roof.

Summary of Response

Drawings:

1. Add "Fig. 5A" to roof plate **39**, shown on Fig. 5.
2. On Figs. 2, 3, and 6, change the bracket referring to the top plate to a lead line.
3. On Figs. 3, 4, and 5, change the bracket referring to the seat **15**.
4. On Fig. 6, delete reference numerals **44** and **45**, and their lead lines.
5. On Fig. 1, add reference numeral **5** and lead line.

Specification:

1. On page 13 of the specification, under Brief description of the drawings, please add "Fig. 5A is a flat pattern layout of a roof plate."
2. On the top of page 25, first paragraph, please add the following underlined words: The roof plate **39**, shown on Fig. 5A, is comprised of a generally flat steel plate **40**.
3. A "Brief Summary of the Invention" is included in this response on a separate page.

Claims:

The changes to the claims are self-explanatory.

Additional Sheets:

1. Copy of front page of applicant's US patent No. 6,662,517 showing parallel rafter tabs **3** and **4** with nail holes.
2. Six copies of replacement drawing sheets, and six copies of annotated drawing sheets.

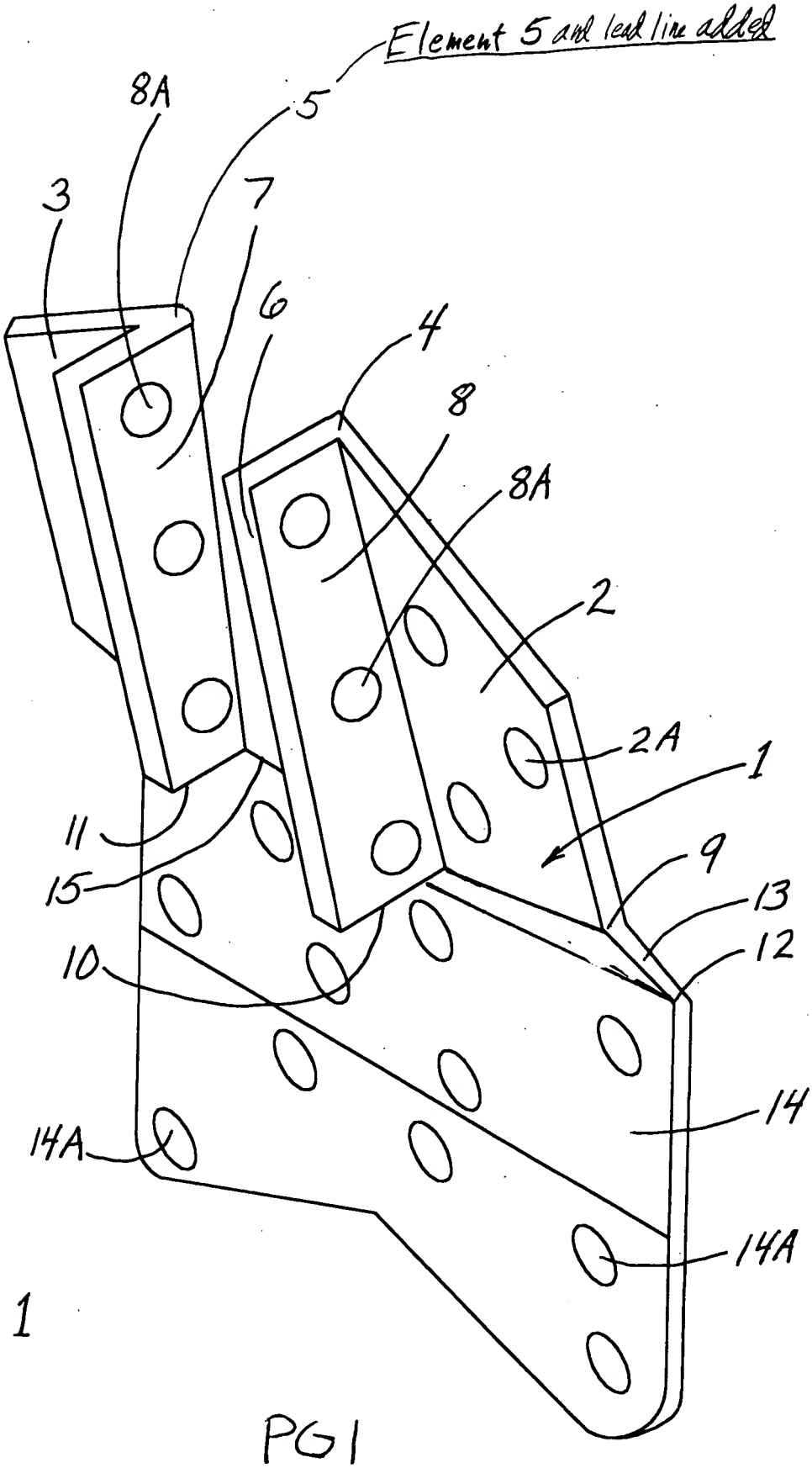

Element 5 and lead line added
8A
5
3
7
6
4
8
8A
2
2A
1
11
9
15
13
10
12
14
14A
14A

FIG. 1

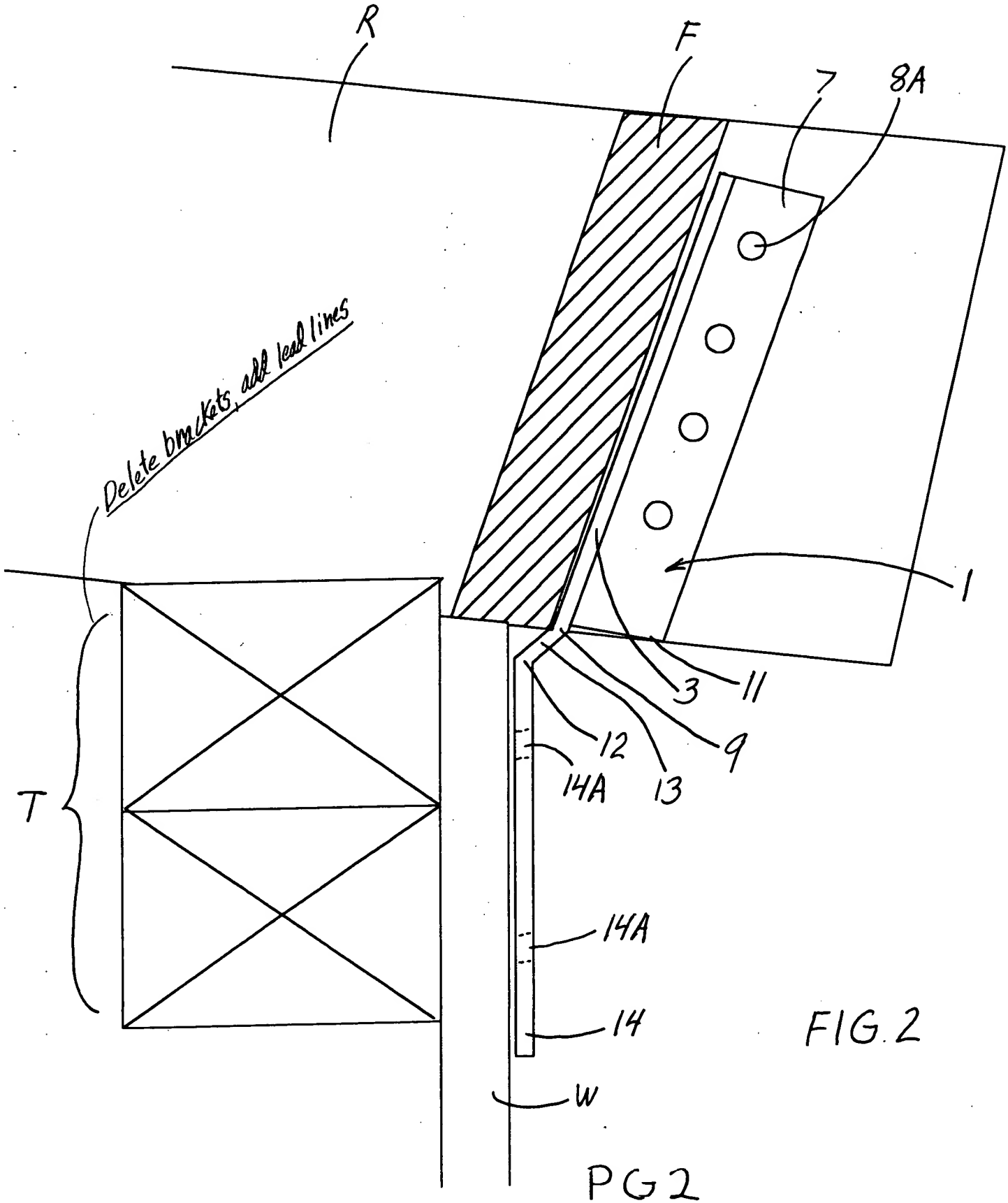

R
F
7
8A
Delete brackets, add lead lines
1
3
11
12
9
13
14A
T
14A
14
W

FIG. 2

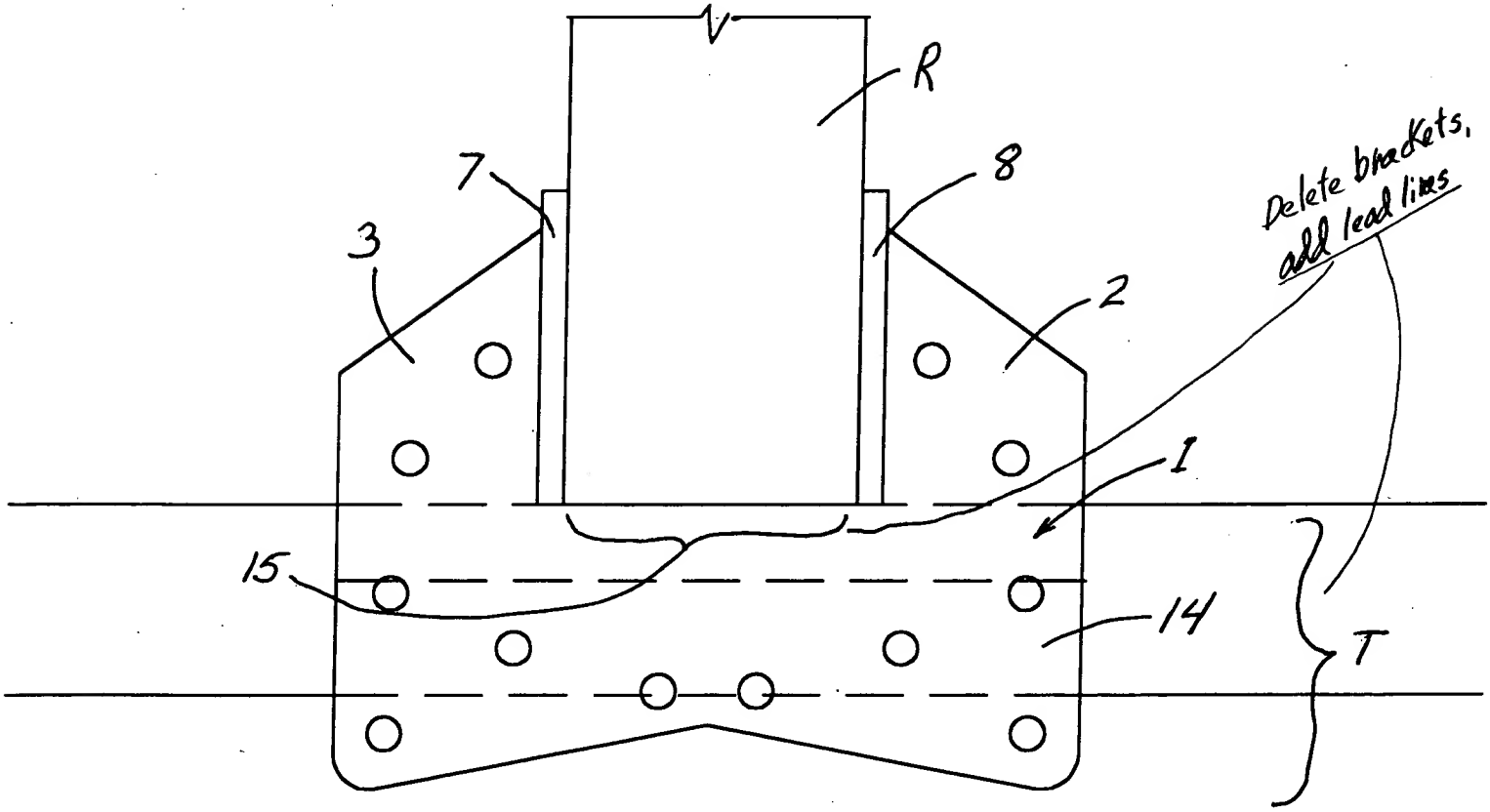
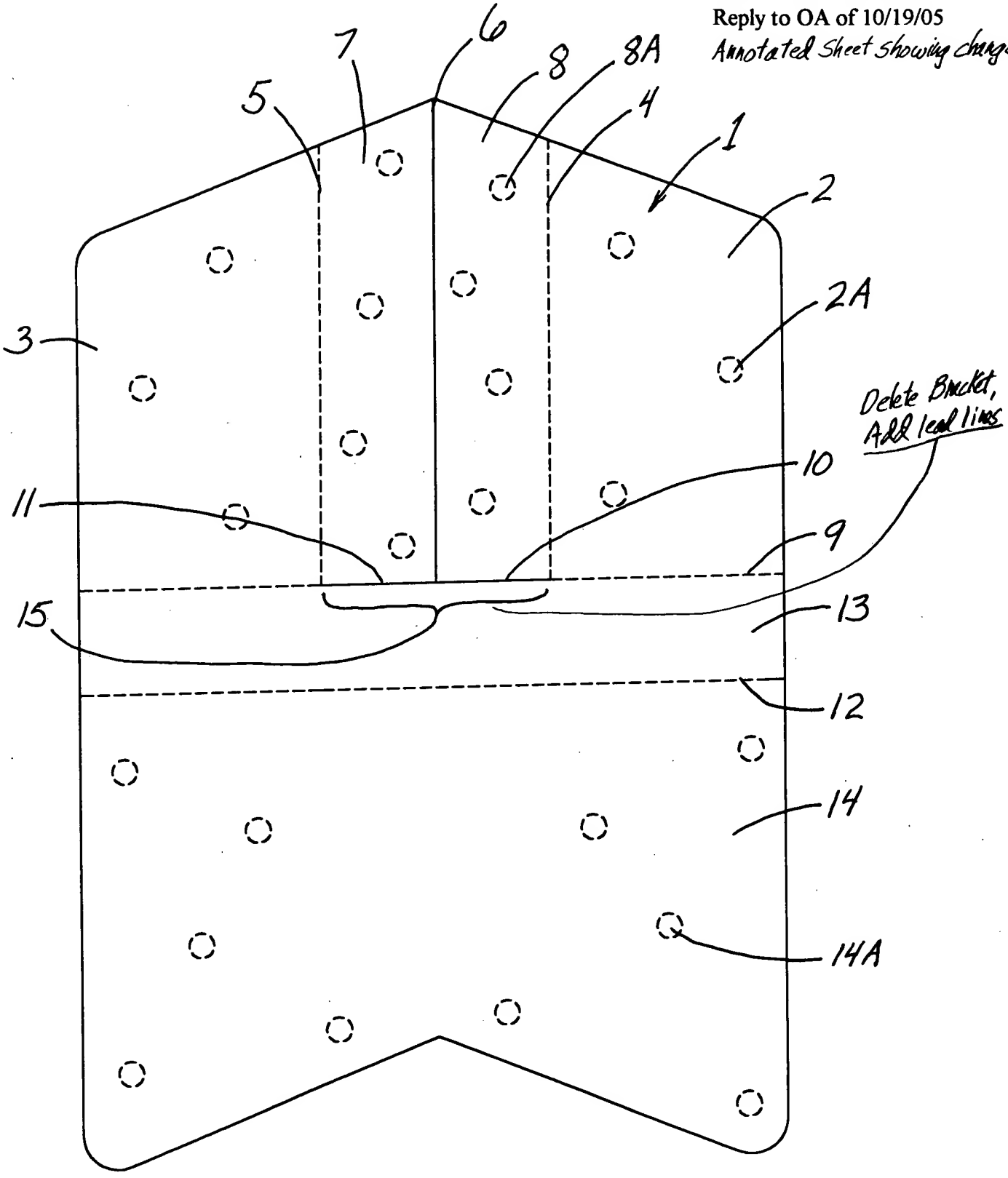


FIG. 3


6
7
8
8A
5
4
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2
2A
3
Delete Bracket,
Add lead lines
10
11
9
15
13
12
14
14A

FIG. 4

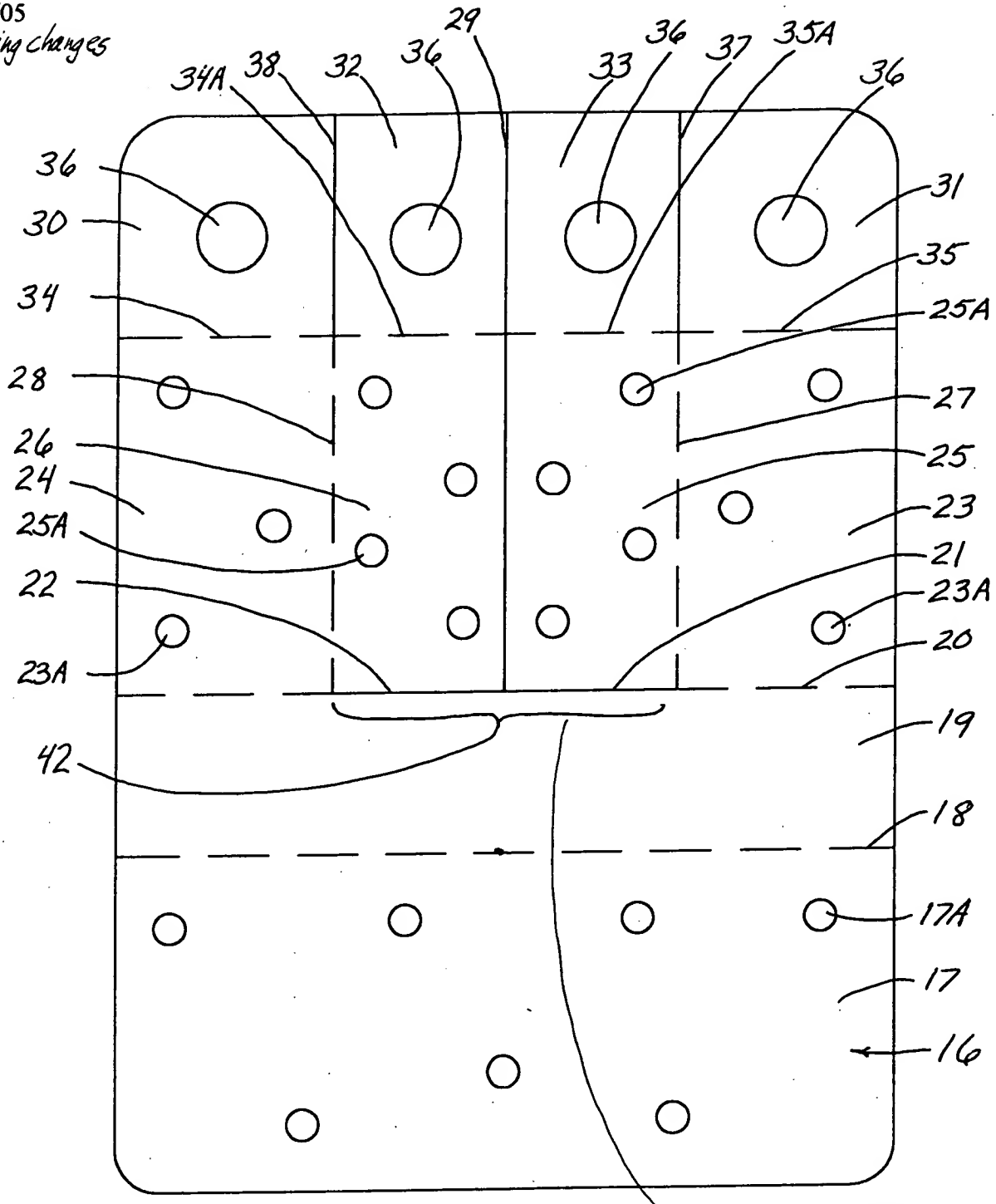
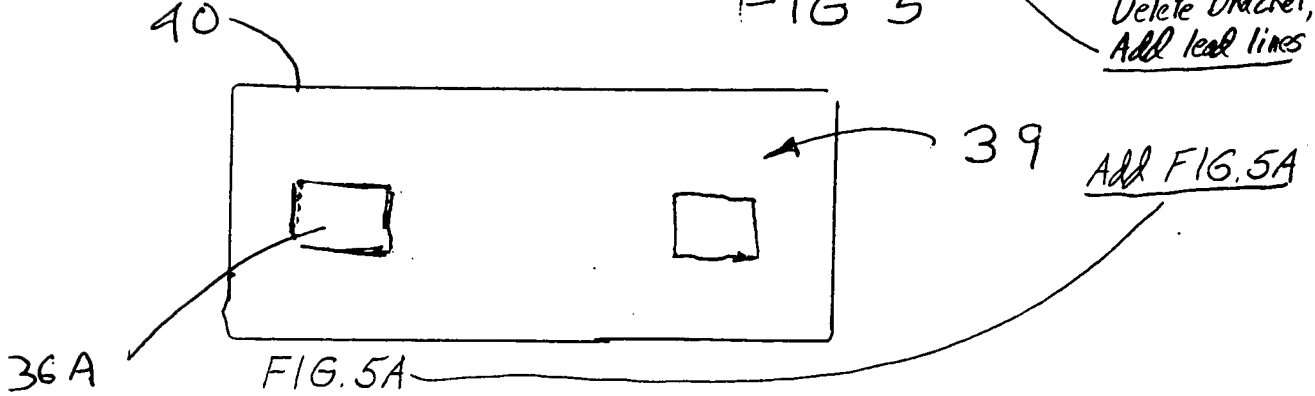


FIG 5

Delete bracket, Add lead lines



Add FIG. 5A

FIG. 5A

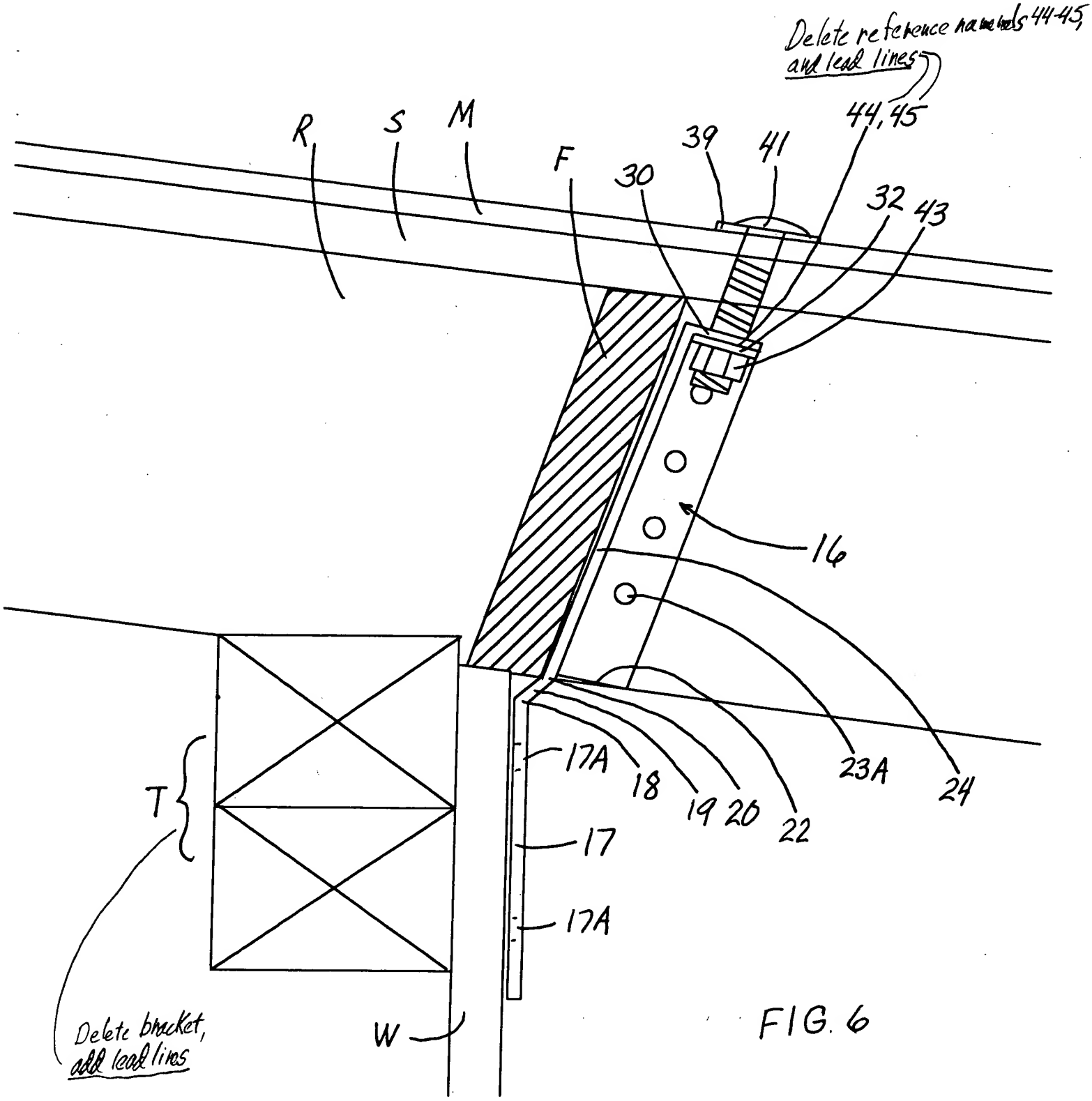

Delete reference numbers 44-45, and lead lines
44, 45
R
S
M
F
30
39
41
32
43
16
T
17A
18
19
20
22
23A
24
17
17A
W
Delete bracket, add lead lines

FIG. 6